2SD0946 (2SD946), **2SD0946A** (2SD946A), **2SD0946B** (2SD946B)

Silicon NPN epitaxial planar type darlington

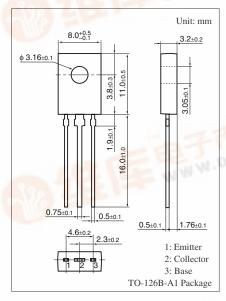
For low-frequency amplification

■ Features

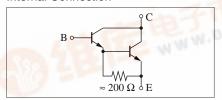
- Forward current transfer ratio h_{FE} is designed high, which is appropriate to the driver circuit of motors and printer hammer.
- A shunt resistor is omitted from the driver.

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage	2SD0946	V _{CBO}	30	V
(Emitter open)	2SD0946A		60	-
	2SD0946B		100	100
Collector-emitter voltage	2SD0946	V _{CEO}	25	V
(Base open)	2SD0946A	1	50	
	2SD0946B	Man	80	
Emitter-base voltage (Col	V_{EBO}	5	V	
Collector current	I_C	1	A	
Peak collector current	I_{CP}	1.5	A	
Collector power dissipation	P _C	1.2	W	
Junction temperature	T_{j}	150	°C	
Storage temperature	T_{stg}	-55 to +150	°C	



Internal Connection



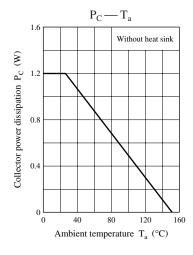
■ Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

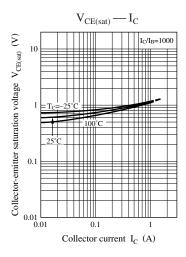
Parameter		Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage	2SD0946	V _{CBO}	$I_C = 100 \mu\text{A}, I_E = 0$	30			V
(Emitter open)	2SD0946A			60			
	2SD0946B			100			
Collector-emitter voltage	2SD1263	V _{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	25		111	V
(Base open)	2SD0946A			50		3 12	
	2SD0946B			80		E 4	
Emitter-base voltage (Colle	ector open)	V _{EBO}	$I_E = 100 \mu\text{A}, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)		I_{CBO}	$V_{CB} = 25 \text{ V}, I_{E} = 0$			0.1	μΑ
Emitter-base cutoff current (Collector open)		I _{EBO}	$V_{EB} = 4 \text{ V}, I_C = 0$			0.1	μΑ
Forward current transfer ratio *1, 2		h _{FE}	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ A}$	4000		40 000	_
Collector-emitter saturation voltage *1		V _{CE(sat)}	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}$			1.8	V
Base-emitter saturation voltage *1		V _{BE(sat)}	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}$			2.2	V
Transition frequency		f_{T}	$V_{CB} = 10 \text{ V}, I_{E} = -50 \text{ mA}, f = 200 \text{ MHz}$		150		MHz

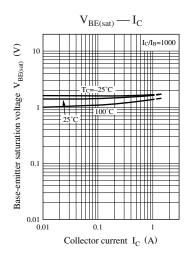
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

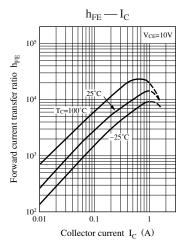
- 2. *1: Pulse measurement
 - *2: Rank classification

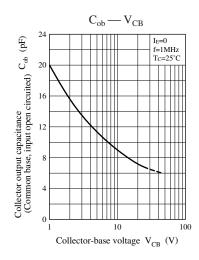
PDF	Q	R	S	
维库—— h _{FE}	4000 to 10000	8 000 to 20 000	16 000 to 40 000	











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